

Economic Consequences of Political Persecution

Radim Boháček (CERGE-EI)
Michał Myck (CenEA & DIW-Berlin)

UAB, February 2020

Introduction

- ▶ Effects of political persecution on economic outcomes in Czechoslovakia
- ▶ Effect of layoffs in politically controlled labor markets (earnings, pensions)
- ▶ Welfare consequences
- ▶ Compensation for political discrimination or oppression
- ▶ Transitional justice theory
- ▶ Life history in the Survey of Health, Ageing and Retirement in Europe

Outline

- ▶ Literature
- ▶ Economic system and labor market
- ▶ Persecution in Czechoslovakia
- ▶ SHARELIFE data
- ▶ Analysis — persecution as treatment
- ▶ Instrumental variables
- ▶ Robustness
- ▶ Implications
- ▶ Conclusions

Literature: Long-Run Effects of Traumatic Events

- ▶ Acemoglu et al. (2011): Holocaust in Russian cities
- ▶ Voth and Voigtlander (2012): Persistence of anti-Semitism
- ▶ Waldinger (2013): Human and physical capital destruction
- ▶ Smith et al. (2014): WWII hunger periods
- ▶ Ochsner (2019): Turkish siege of Vienna, Red Army in Austria
- ▶ Becker et al. (2018): Post-WWII population transfers in Poland
- ▶ Conzo and Salustri (2019): Long-run effects of WWII on trust

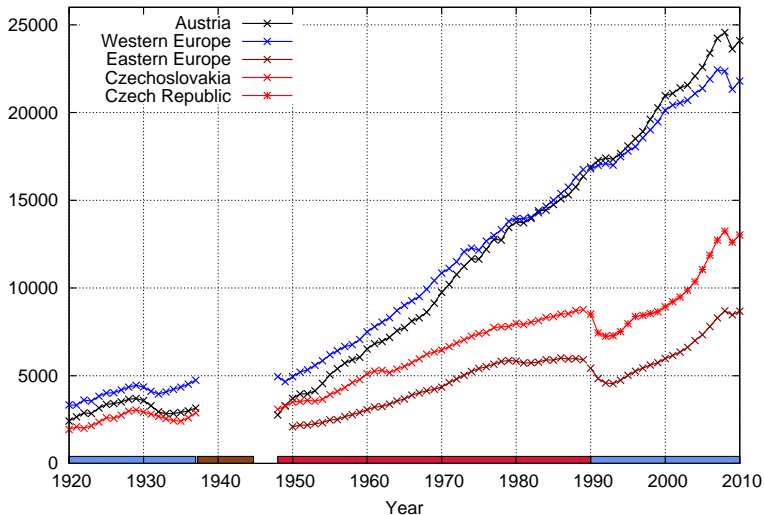
Literature: Politically Controlled Labor Market

- ▶ Departure from competitive labor markets (MPL)
- ▶ Discrimination: wage gaps (race, gender)
Heckman (1995), Neal and Johnson (1996), Carneiro et al. (2005)
- ▶ Statistical discrimination by employers
Altonji and Pierret (2011)
- ▶ Job characteristics and preferences
- ▶ Positive wage premia (unions, party membership)
- ▶ Fully controlled labor market

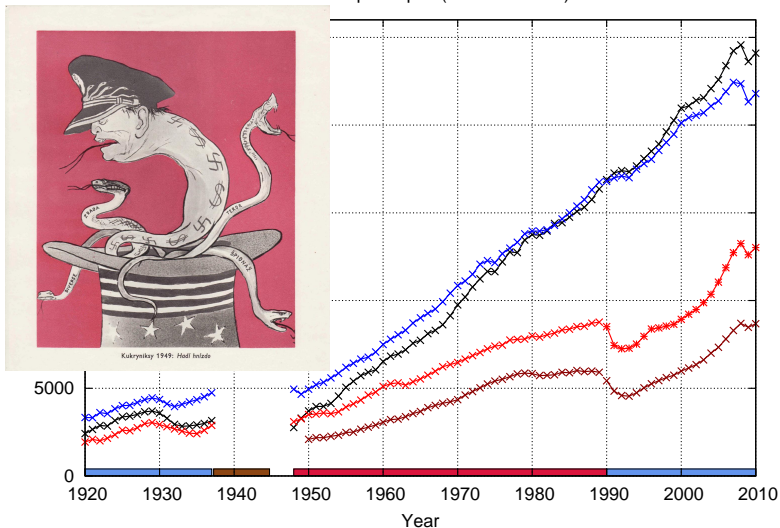
Literature: Reparations and Transitional Justice

- ▶ Compensation for political oppression or discrimination
- ▶ Acemoglu and Robinson (2006)
- ▶ Development through justice theory
Elster (2006), DeGreiff (2006), Olsen et al. (2011)
- ▶ Stability theory
Forget and forgive

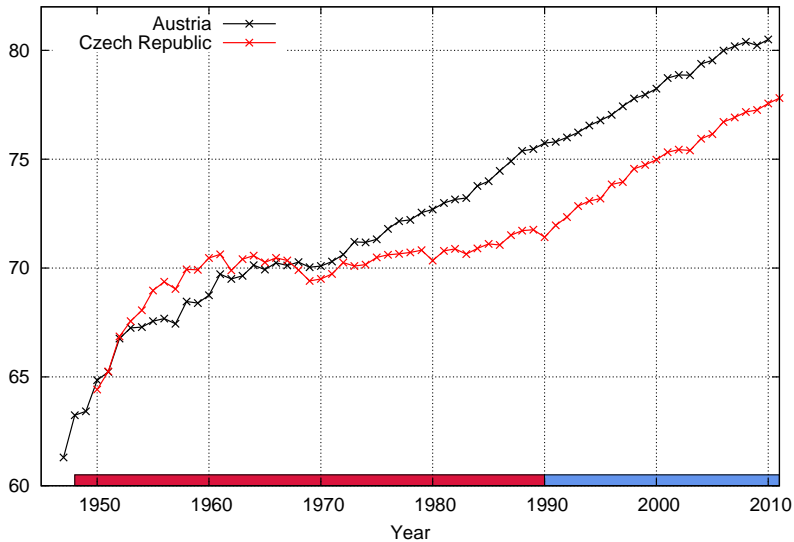
Real GDP per capita (1990 Intl. USD)



Real GDP per capita (1990 Intl. USD)



Life Expectancy at Birth (Years)

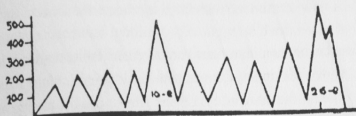


Czechoslovakia 1948-1989

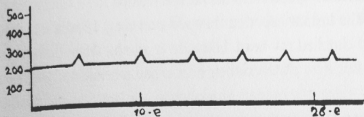
- ▶ Communist totalitarian system
- ▶ Centrally planned economy
- ▶ Complete nationalization of property
- ▶ Periods: Stalinism, post-Stalinism, Prague Spring, Soviet occupation
- ▶ Labor market
 - Right to work = obligation to work
 - Full control: Education, occupation, job, wage
 - Over-employment, labor hoarding, low productivity

Venedikt Yerofeyev *Moscow-Petushky*

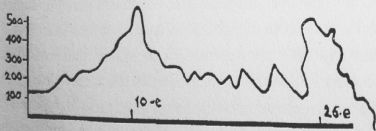
Here, for instance, is the chart of one Victor Totoshkin, Komsomol member: enjoy . . .



And this is Alexei Blindyaev, Communist Party member since 1936, and shagged-out old creep:



And behold – your humble servant, ex-brigade leader of the OTC cable layers, and author of the poem *Moscow Stations*:



Drinks:

- ▶ The Tear of a Komsomol Girl
 - Lavender water
 - Verbena
 - Forest Water eau-de-Cologne
 - Nail varnish
 - Mouthwash
 - Lemonade

- ▶ Dog's Giblets
 - Zhiguli beer
 - Sadko the Wealthy Guest shampoo
 - Anti-dandruff solution
 - Superglue
 - Brake fluid
 - Insecticide

Czechoslovakia 1948-1989

- ▶ Egalitarian system
- ▶ Guaranteed employment
- ▶ Female labor market participation
- ▶ Universal health care and education
- ▶ Low inequality

Persecution in Czechoslovakia 1948-1989

Population 1948	8,893,000
Arrests	205,000
Corrective Labor Camp	70,000
Penal Labor Camp	20,000
Military	60,000
Clergy	10,300
Deaths	
Executed	248
Prison	4,500
Border	300
Total estimate	15,000
Emigration	270,000
Job losses (70's and 80's)	280,000



SHARE

- ▶ Survey of Health, Ageing and Retirement in Europe
- ▶ Longitudinal, harmonized, multidisciplinary
- ▶ Panel respondents 50+ and partners
- ▶ Since 2006: 7 waves every two years
- ▶ Health and Retirement Study (US), ELSA, China, India, Japan etc.

SHARELIFE

- ▶ Life history: Wave 3 and 7
- ▶ Early childhood conditions
- ▶ Family history (partners, marriages, children)
- ▶ Labor market history (jobs, unemployment spells, disability, retirement)
- ▶ Health and health-care history
- ▶ Major life events (persecution)
- ▶ Czech Republic: 5,053 interviews (1,802 in Wave 3 and 3,251 in Wave 7)

SHARELIFE persecution module

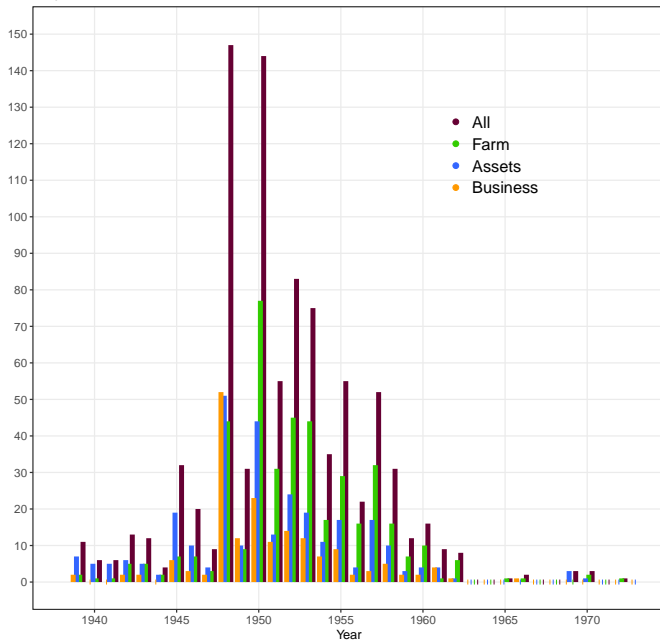
Persecution

There are times in which people are persecuted or discriminated against, for example because of their political beliefs, religion, nationality, ethnicity, sexual orientation or their background. People may also be persecuted or discriminated against because of political beliefs or the religion of their close relatives. Have you ever been the victim of such persecution or discrimination?

SHARELIFE Persecution and Dispossession

- ▶ General persecution
- ▶ Dispossession (farm, business, assets; year)
- ▶ On the job persecution
 - ▶ Job loss
 - ▶ On-the-job discrimination
 - Denied promotions
 - Assignment to a task with fewer responsibilities
 - Working on tasks below one's qualifications
 - Harassment
 - Pay cuts

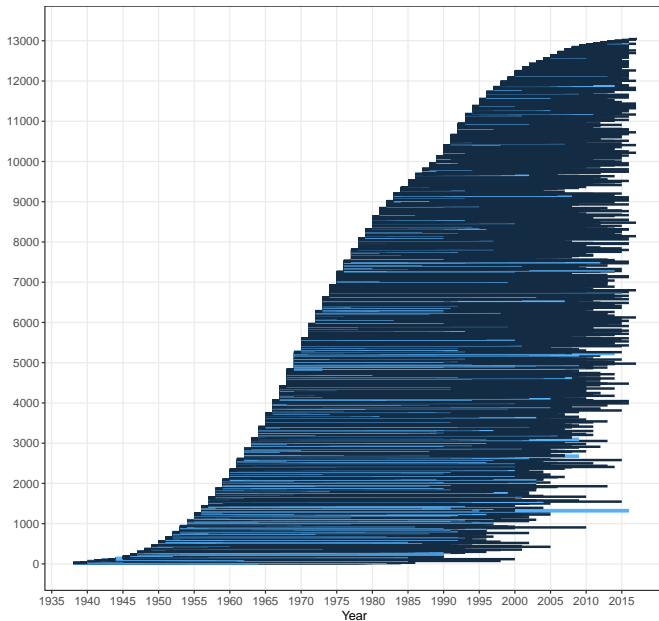
Dispossession



Source: SHARE Data.

Job Persecution

Job spells. Persecuted = light color



Source: SHARE Data.

Treatments

- ▶ Persecuted (ever)
- ▶ Dispossessed (ever=before jobs)
- ▶ Job discrimination
- ▶ Job loss due to persecution
- ▶ Job laid off (other reason than persecution)
- ▶ Job displaced (plant closure or downsizing)

SHARELIFE Descriptive statistics

	All	Ever		Ever Job	Ever Job Loss		
		Pers.	Disp.	Discr.	Pers.	Laid Off	Displ.
Fraction	1.00	0.12	0.13	0.06	0.03	0.05	0.16
Year of birth	1944	1942***	1943*	1941**	1940*	1948***	1946***
Female	0.57	0.45**	0.54	0.29***	0.33*	0.54	0.66*
Educ. >13 yrs	0.18	0.33***	0.20	0.48***	0.67***	0.16	0.20
Birthpl. owner	0.61	0.61	0.76***	0.53	0.67	0.68	0.54

N=1,521. *p*-values: two-group mean comparison test treated vs. non-treated group

SHARELIFE Jobs

- ▶ 1,521 individuals who had at least one job before 1989
- ▶ 2,319 all jobs
- ▶ 1,228 second and consequent jobs
- ▶ Earnings: starting salary relative to official average in each year

Relative Net Earnings

	All jobs	All but first jobs
All	1.11	1.26
Male	1.35	1.58
Female	0.93	1.04
Education <9 years	1.03	1.08
Education 9-13 years	1.08	1.23
Education >13 years	1.21	1.41
White collar	1.14	1.29
Blue collar	1.05	1.16
Persecuted ever	1.06	1.16
Job after dispossession	0.98	1.05
Job after persecution loss		0.93
Job after discrimination		1.33
Job after laid off		1.24
Job after displaced		1.21
N	2,319	1,220

SHARELIFE Pensions

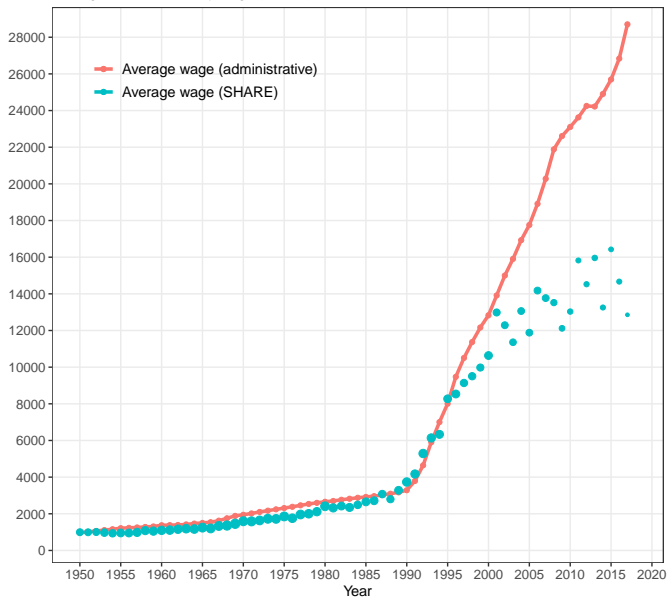
- ▶ 614 initial pension before 1994 and current pension in 2006
- ▶ Pensions: relative to official averages in each year

Relative Pensions

	Relative Pension	
	Initial	Current in 2006
All	1.11	0.96
Male	1.18	1.06
Female	1.07	0.91
Education <9 years	1.09	0.90
Education 9-13 years	1.11	0.94
Education >13 years	1.10	1.04
Persecuted ever	1.03	0.93
Dispossessed ever	1.05	0.98
Job loss persecution ever	0.82	1.03
Job discrimination ever	1.00	1.00
Job laid off ever	0.88	0.96
Job displaced ever	0.94	0.94

Wages in 1950–2017

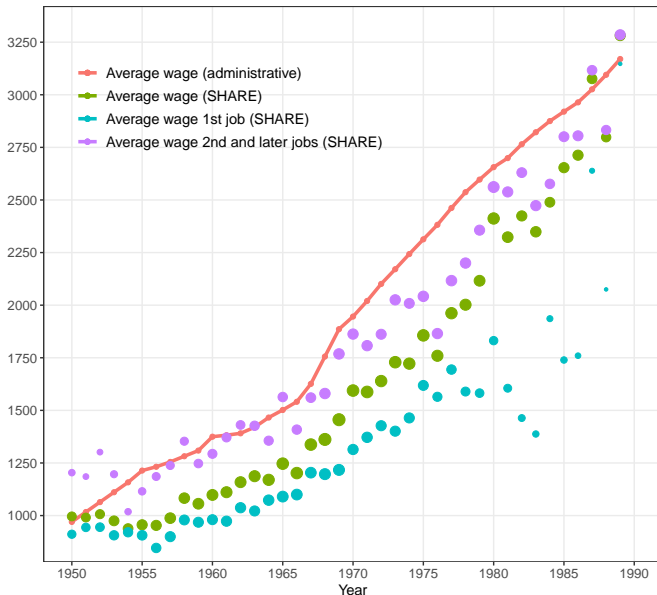
Average nominal monthly wage (in CZK)



Source: SHARE Data, the Czech Statistical Office. Point size: log of the SHARE sample size.

Wages in 1950–1989

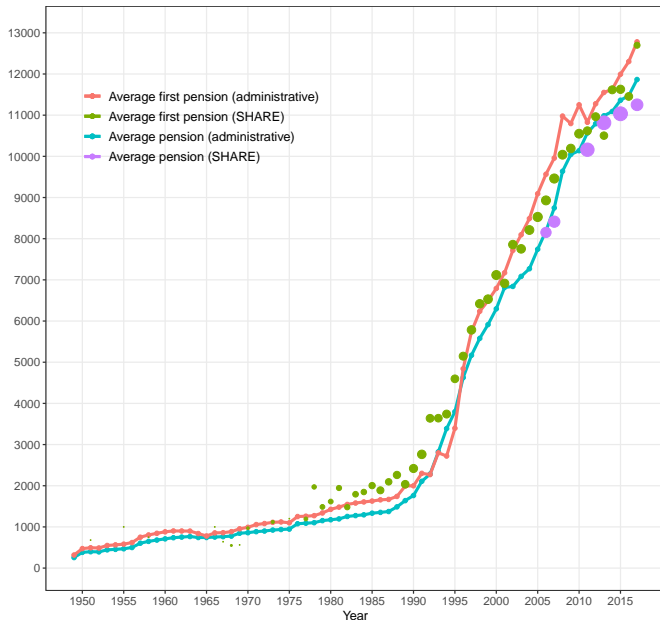
Average nominal monthly wage (in CZK)



Source: SHARE Data, the Czech Statistical Office. Point size: log of the SHARE sample size.

Pensions

Average nominal monthly pension and the average nominal monthly first pension (in CZK)



Source: SHARE Data, the Czech Statistical Office. Point size: log of the SHARE sample size.

Treatment determinants (probit)

$$P(T_i = 1) = \Phi(\beta' X_i + \varepsilon_i)$$

$$T_i \in \{0, 1\} \text{ treatment} = 1 \text{ if } \left\{ \begin{array}{l} \text{Persecuted ever} \\ \text{Dispossessed ever} \\ \text{Job loss persecution ever} \\ \text{Job discrimination ever} \\ \text{Job laid off ever} \\ \text{Job displaced ever} \end{array} \right.$$

X_i — individual characteristics before treatment
(birth year, gender, education, birthplace, age-10 conditions)

Determinants (correlates) of treatment: Probit marginal effects

	Ever		Ever Job	Ever Job Loss		
	Persec. (1)	Disposs. (2)	Discr. (3)	Persec. (4)	Laid Off (5)	Displ. (6)
Year of birth	-0.003*** (0.001)	-0.002 (0.001)	-0.002*** (0.001)	-0.001** (0.000)	0.004*** (0.001)	0.004*** (0.001)
Female	-0.043*** (0.015)	-0.006 (0.018)	-0.033*** (0.010)	-0.006 (0.006)	-0.008 (0.011)	0.033** (0.015)
Educ. >13 yrs	0.069*** (0.026)	0.075** (0.032)	0.070*** (0.022)	0.036*** (0.012)	-0.009 (0.021)	0.012 (0.025)
Birthpl. owner	0.010 (0.016)	0.094*** (0.020)	-0.003 (0.010)	0.005 (0.006)	0.006 (0.012)	-0.030* (0.016)

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Effects of fixed treatment on earnings

$$\ln(rEarn_{it}) = \alpha T_i + \gamma' X_i + \delta' Z_{it} + \varepsilon_{it}$$

- ▶ $rEarn_{it}$ — relative starting earnings on a job at time t



$$T_i \in \{0, 1\} \text{ treatment} = 1 \text{ if } \begin{cases} \text{Persecuted ever} \\ \text{Dispossessed ever} \end{cases}$$

- ▶ X_i — individual characteristics before treatment
(birth year, gender, education, birthplace, age-10 conditions)
- ▶ Z_{it} — job characteristics
(job year, industry, full time, experience, job tenure, out-of-LM)

Effects of dynamic treatment on earnings in subsequent jobs

$$\ln(rEarn_{it}) = \alpha T_{it} + \gamma' X_i + \delta' Z_{it} + \varepsilon_{it}$$

- ▶ $rEarn_{it}$ — relative starting earnings on a job at time t

$$T_{it} \in \{0, 1\} \text{ treatment at time } t = 1 \text{ if } \begin{cases} \text{Job after persecution loss} \\ \text{Job after discrimination} \\ \text{Job after laid off} \\ \text{Job after displaced} \end{cases} \quad \text{at } s < t$$

- ▶ X_i — individual characteristics before treatment
(birth year, gender, marriage, children, education, birthplace, age-10)
- ▶ Z_{it} — job characteristics
(job year, industry, full time, experience, job tenure, out-of-LM)

Treatment effect on earnings: OLS estimates

	(1)	(2)	(3)
Persecuted ever	-0.040 (0.044)		
Job after dispossession			-0.098** (0.046)
Job after persecution loss		-0.338*** (0.086)	-0.316*** (0.084)
Job after discrimination		0.011 (0.146)	0.072 (0.153)
Job after laid off		0.227 (0.163)	0.226 (0.159)
Job after displaced		0.026 (0.104)	0.026 (0.103)
Additional controls			
R ²	0.361	0.369	0.373

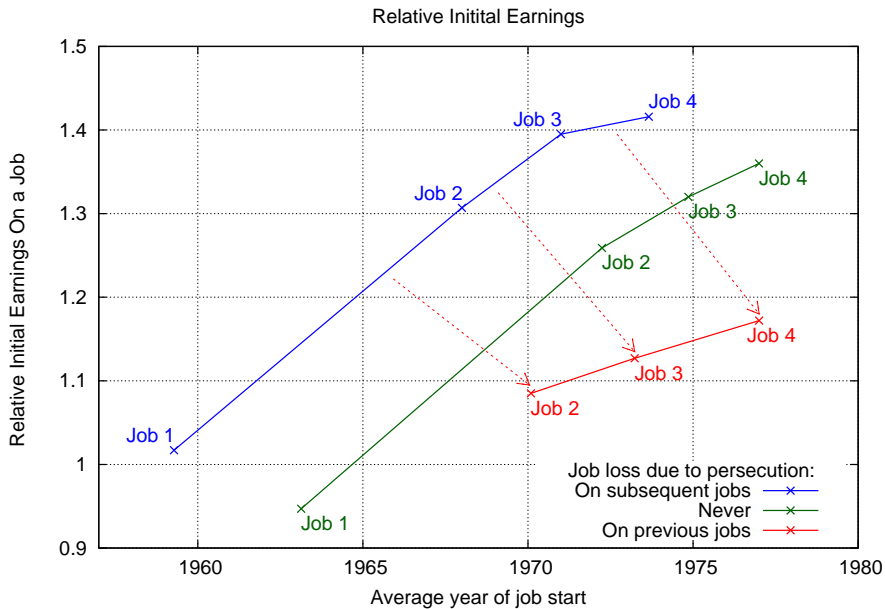
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Childhood controls included.

Mechanism of career degradation

Predicted probability of switching from white to blue collar job

- ▶ Sample: 6.6%
- ▶ After being discriminated: 10.7%
- ▶ After being laid off: 16.2%
- ▶ After being displaced: 18.8%
- ▶ After job loss due to persecution: 23.9%





Effect of each treatment on retirement pensions

$$\ln(rPens_i) = \alpha T_i + \gamma' X_i + \delta' Z_i + v_i$$

- ▶ $rPens_i$ — relative pension (initial before 1994 or current in 2006)

$$T_i \in \{0, 1\} \text{ treatment} = 1 \text{ if } \left\{ \begin{array}{l} \text{Persecuted ever} \\ \text{Dispossessed ever} \\ \text{Job loss persecution ever} \\ \text{Job discrimination ever} \\ \text{Job laid off ever} \\ \text{Job displaced ever} \end{array} \right.$$

- ▶ X_i — individual characteristics before treatment
(birth year, gender, marriage, children, education, birthplace, age-10)
- ▶ Z_i — career characteristics
(year of first pension, ever in industry, job title)

Treatment effect on pensions: OLS estimates

	Initial Pension			Current Pension in 2006		
	(1)	(2)	(3)	(4)	(5)	(6)
Persecuted ever	-0.030 (0.051)			-0.003 (0.024)		
Dispossessed ever			-0.012 (0.045)			-0.011 (0.021)
Job loss pers. ever		-0.402** (0.187)	-0.405** (0.186)		0.030 (0.066)	0.027 (0.066)
Job discr. ever		0.032 (0.049)	0.036 (0.051)		-0.021 (0.036)	-0.016 (0.037)
Job laid off ever		-0.169** (0.086)	-0.170** (0.086)		-0.005 (0.033)	-0.006 (0.033)
Job displ. ever		-0.084* (0.048)	-0.085* (0.048)		-0.039* (0.023)	-0.040* (0.023)
Female	-0.175*** (0.052)	-0.192*** (0.051)	-0.191*** (0.052)	-0.134*** (0.024)	-0.134*** (0.024)	-0.133*** (0.024)
Born in country	-0.238*** (0.076)	-0.226*** (0.076)	-0.226*** (0.075)	-0.012*** (0.027)	-0.013*** (0.027)	-0.012*** (0.027)
R ²	0.173	0.207	0.207	0.386	0.390	0.391

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Instrumental Variables: Job Loss Due to Persecution

- ▶ Justification bias: declaration of treatment (persecution) to justify failures
- ▶ Selection into persecution
- ▶ Unobservable characteristics
- ▶ Instrumental variables
- ▶ Year of job loss correlated with intensity of “aggregate” persecution:
 - ▶ Rehabilitation cases
 - ▶ Prosecution cases
 - ▶ New: secret service archives

Instrumental Variables: Rehabilitation

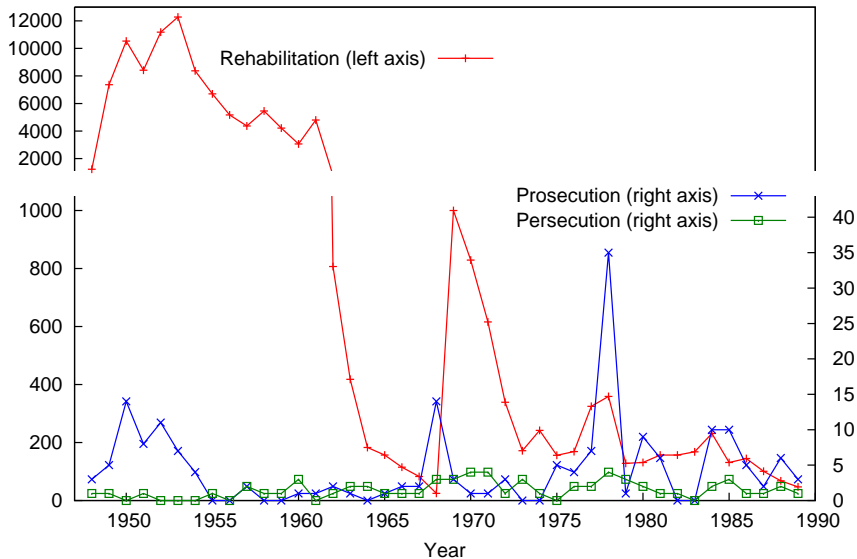
- ▶ The Act on Judicial Rehabilitation 119/1990
- ▶ Ex lege rehabilitation
Acts 50/1923, 231/1948, 86/1950, 140/1961, and 150/1969
- ▶ Total rehabilitated cases: 195,672
- ▶ Political cases: 100,425 (total - emigration)
- ▶ Economic cases: 46,404

Instrumental Variables: Prosecution

- ▶ Bureau for Investigation and Documentation of the Crimes of Communism (Act 283/1991)
- ▶ Number of prosecuted party leaders, secret police agents, border guards, and other officials for criminal acts, violations of human rights and other abuses during the communist regime between 1948 and 1989
- ▶ 189 cases of prosecution
- ▶ 89 prosecuted agents of the secret service (StB)
- ▶ Abuse of authority: 119, murder: 13, assault: 33

Instrumental Variables

Instrumental Variables: Rehabilitation and Prosecution Cases 1948-1989



Archives of the Secret Services (StB)

- ▶ Archive of the Security Services of the Czech Republic (ABSCR)
- ▶ Case and agent files (partly destroyed in 1989)
- ▶ Department of Statistics and Evidence
- ▶ Aggregate data: agents and cases
- ▶ Activities: year, region, objectives
- ▶ Services: intelligence, counter-intelligence, military, domestic, foreign

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mapa č. 2

Statistické přehledy

Stb vyšetřovanců

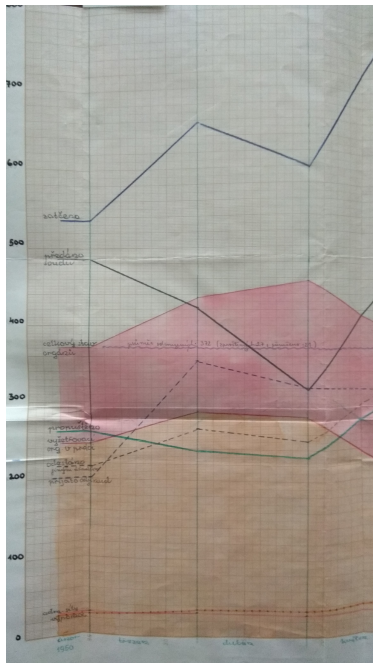
a celostátní

b/ české kraje

c/ slovenské kraje

únor - červenec 1950

a přehled o nápadu věci Pstb.



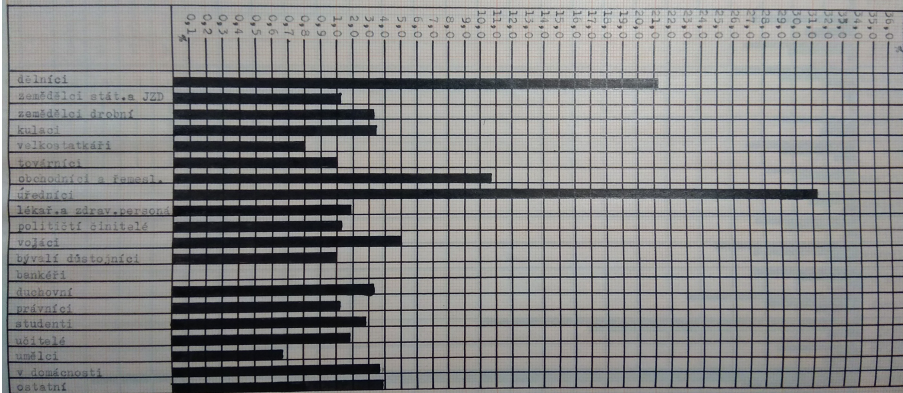
Přehled vyšetřovaných osob

I. Trestné činy		II. Stav														III. Stav vyšetřovacích svazků									
		Zůstatek k 1./		Přibýlo				Ubylo						Zůstatek k 1./		Založeno nových a převzato z jiných útvarů		Vráceno k došetření		Předáno soudu		Předáno jiným útvarům			
				Založeno svazků	Z jiných útvarů	Předáno jiným útvarům	Úplně zastaveno	celkem vyšetřováno	z toho vyšetřováno na svobodě																
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
velezrada			297	49	53	1	8	109	59	2	39	3	2			813	127	5	13	146	127	59	1		
sdrůžování proti republice			133	96	14			712	13	1	109		1			715	60			516	60	13			
pobuřování proti republice			139	40	1			168			16					151	20			56	19				
podpora a propagace fašismu			68	1				58			12	1				69	8			9	49				
sabotáž	diverse		13	7			1	26			1					15	4	1		3	23				
	hospodářská		189	34	23		1	380	30	28	31					219	28	1		113	28	30			
	americká		159	5	55		5	264	56	3	31		1			210	45	9	1	64	46	56			
	anglická		24	14				29	11	2	9					37	11			8	11	11			
	francouzská		45	5	5			56	5		3					52	6			4	6	5			
	jugoslávská		11		1			20	1		3					12	3			6	4	1			
špionáž	italská		1						1							1									

Vazby.

Osoby rozpracované v měsíci č e r v n u 1951 dle povolání.

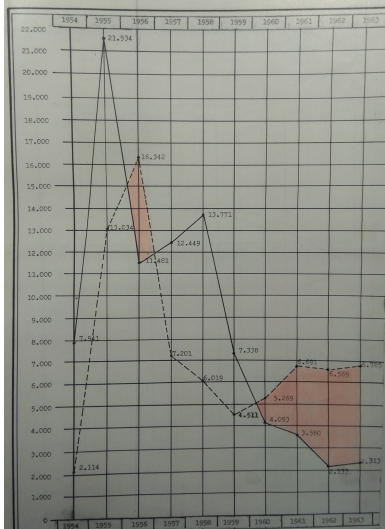
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č. 1.

Retrospektivní bilance
pohybu sítě tajných spolupracovníků
od roku 1954.

— zřeknutí — ukončení

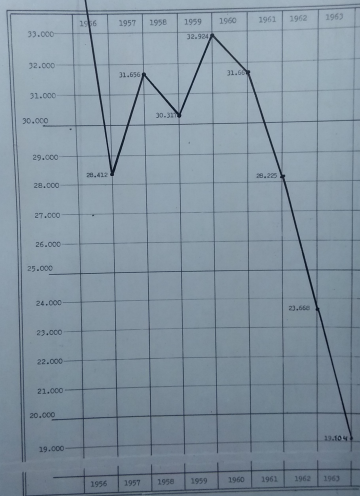


č. 3.

37.972

VÝVOJ STAVU TAJNÝCH SPOLUPRACOVNÍKŮ STB

od 1. ledna 1956 do 31. prosince 1963 celostátně bez VKH



		Vybětováno k 1.10.54									z toho				nově vybětováno z populu								
		z nich				z toho					z toho				operativy								
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
		c e k e m	ve výběř. vzápě na svobodě	osoby nezaměstn. pobytu	vybětováno skupin	vyběř. osob ve skupinách	do 2 měsíců	přes 2 měsíce	c e k e m	nově vybětováno	ve výběř. vzápě	vyběř. na svobodě	osobní	osoby nezaměstn. pobytu	vybětováno skupin	2. odboru	3. odboru	4. odboru	5. odboru (OZO)	osobních společst. MV	PS	ostatní	
Správa vyř. VM	1	11	11			1	4	6	5	16	11	1	4	4	3	2	1				1	5	
KS-VM Praha	2	20	18	2		1	4	15	5	18	15	2	1	16	1					1			
Č. Budějovice	3	9	7			1	2	7	3	35	29	4	2	10		1				2	22		
Plzeň	4	7	9					9		32	32					5	3	2		1	21		
Karlovy Vary	5	9	8	1				9		59	46	8	3	6	2	4	2			4	35	4	
Ústí n. L.	6	5	5					5		23	12	11		2	2					8	11		
Liberec	7	1	1	1				1		21	16	1	3	1	2	1		2		8	4	4	
Hradec Král.	8	1	1					1		7	3	2	2			1	1			2		3	
Parbítice	9	7	7			1	6	7		20	9	11		8		3	7			2			
Jihlava	10	9	4	5			4	5		20	19		1			5				10	5		
Brno	11	28	17	5		3	8	22		54	29	13		5	4	7	7	1	13	15	2		
Olomouc	12	6	6					6		53	31	2		1	3	7	2		17	3			
Gottwaldov	13	8	2					8		20	19	1		5	2	5	3		2	1			
Ostrava	14	16	15	1		2	7	15	1	29	20	7	2	8	4	7	3	1	2	2			
Bratislava	15	14	12	2		1	4	14		59	53	4		3		9	5		7	33			
Nitra	16	5	2	3				5		47	20	16	8	3		27	5		1	4	1	4	
B. Bystrica	17	2	2					2		4	2		2			1	3				6		
Zilina	18	3	1	2		1	2	3		10	6	2	2			1	2	3			4		
Košice	19	3	3					3		10	10												
Prešov	20	4	4					4		2	2			1									
Jičimov	21	6	4	2				6		17	13	4					5		4	3			
ŽD-MV Praha	22																						
Plzeň	23									1	1			1									
Ústí n. L.	24																						
Olomouc	25																						
Bratislava	26																						
Košice	27																						
Správa MV	28	8	2					2		5	2	3								5			
KR-VU-1	29	4	4			1	2	4		9	8	1								7	1	1	
KR-VU-2	30	5	4	1				5		16	14	2		4						11	1		
Společnost	31	129	101	22	3	12	39	167	46	863	412	83	54	4	77	54	29	19	6	100	160	21	

82

Vypočet: 15.10.1917






gov. a. J. 1917

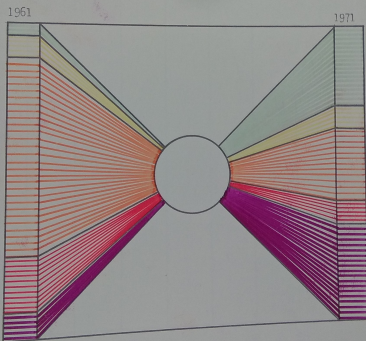
Vypočet: 1.10.1917

GRAFICKÉ ZNÁZORNĚNÍ

podílu některých způsobů ukončení operativního
rozpracování osob za r.1971 a porovnání s r.1961

LEGENDA:

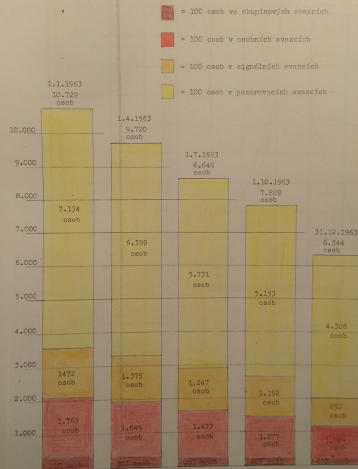
-  - ukončeno návrhem na vyšetřování
-  - ukončeno prevent.výchovným opatřením
-  - ukončeno pro nepotvrzení materiálů
-  - ukončeno pro nedostatek důkazů
-  - ukončeno pro jiné důvody



8.4.

ZMĚNY VE STAVU ROZPRACOVÁNÍ BĚHEM ROKU 1963

(bez VK, PS a NZ)



č. 6.

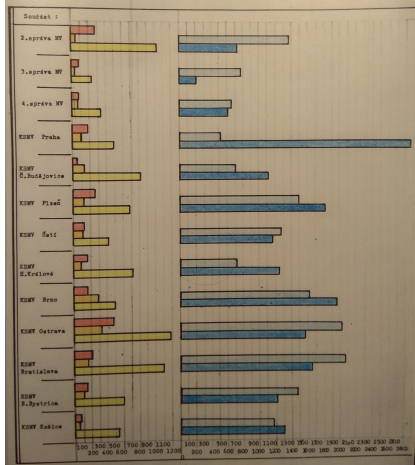
Srovnání stavů
rozpracování agentury k 31. prosinci 1963
podle jednotlivých součástí

Rozpracování:

- = 100 osob ve skup. s osob. svazcích
- = 100 osob v signálních svazcích
- = 100 osob v pozorovacích svazcích

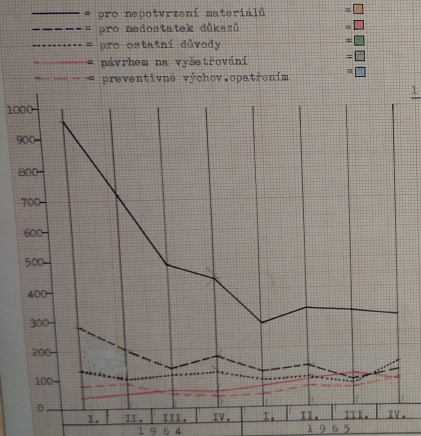
Agentura:

- = 100 agentů
- = 100 informátorů

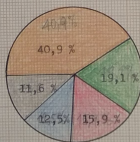


POROVNÁNÍ FAKTICKÉHO UKONČENÍ A NOVÉ ZAVEDENÉHO OPERATIVNÍHO ROZPRACOVÁNÍ

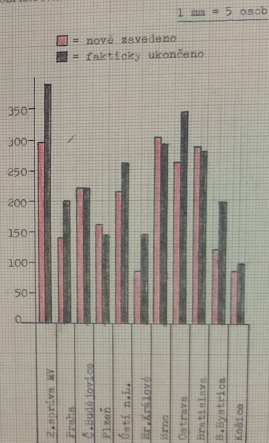
VÝVOJ FAKTICKÉHO UKONČENÍ PODLE ZPŮSOBU:
(bez V.SMV, PŠ a NZ)



Poměr v % k 31.12.1965



PODÍL SOUČÁSTÍ NA ZAVEDENÉM A UKONČENÉM
ROZPRACOVÁNÍ V ROCE 1965

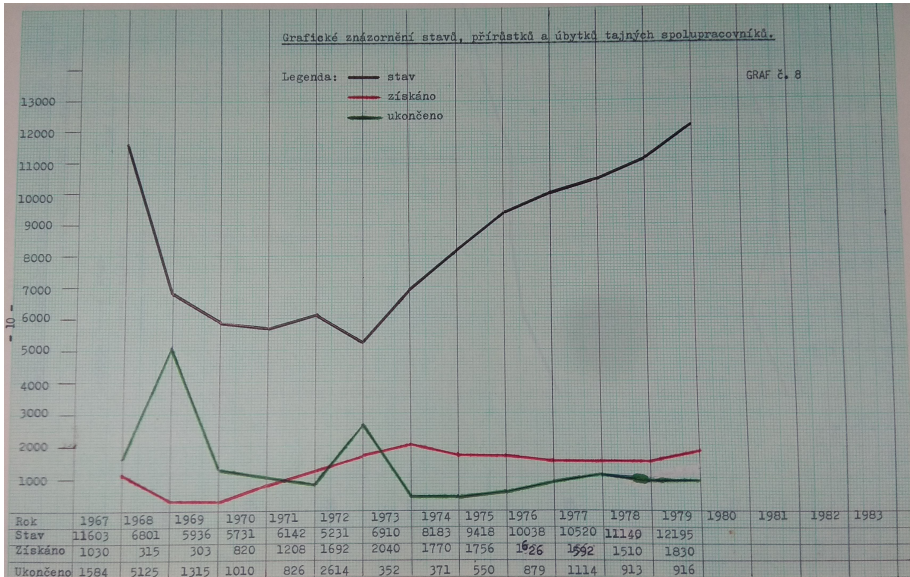


Tabulka č. 2

Grafické znázornění stavů, přírůstků a úbytků tajných spolupracovníků.

GRAF č. 8

Legenda: — stav
— získáno
— ukončeno



Poznámka: stavy jsou uvedeny vždy k 31.12. příslušného roku.

UKONCENE SVAZKY KONTRAROZVEDNEHO ROZPRACOVANI ROZVEDENE PODLE DRUHU SVAZKU, UTVARU A LINII
 ~~~~~

|                           | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 12 | 88 | CELKEM |
|---------------------------|----|----|----|----|----|----|----|----|----|----|----|----|--------|
| LINIE VNEJSIHO NEPRITELE: |    |    |    |    |    |    |    |    |    |    |    |    |        |
| OSOBNÍ SVAZKY             | 0  | 2  | 0  | 0  |    |    |    | 2  | 0  | 0  | 0  | 1  | 9      |
| Z TOHO CIZINCŮ            | 0  | 1  | 0  | 0  | 1  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 2      |
| SIGNALNÍ SVAZKY           | 17 | 1  | 8  | 2  | 4  | 5  | 8  | 11 | 2  | 6  | 1  | 21 | 86     |
| Z TOHO CIZINCŮ            | 6  | 0  | 0  | 0  | 1  | 2  | 2  | 1  | 1  | 0  | 0  | 16 | 29     |
| PATRACÍ SVAZKY            | 7  | 1  | 4  | 0  | 0  | 5  | 1  | 0  | 0  | 1  | 1  | 5  | 21     |
| OBJEKTOVÉ SVAZKY          | 7  | 1  | 3  | 5  | 2  | 1  | 21 | 4  | 6  | 7  | 34 | 95 |        |
| KONTROLNÍ SVAZKY          | 0  | 0  | 1  | 0  | 1  | 1  | 2  | 0  | 1  | 1  | 0  | 34 | 41     |
| CELKEM SVAZKU             | 27 | 5  | 16 | 7  | 8  | 13 | 34 | 17 | 7  | 14 | 9  | 95 | 252    |
| Z TOHO NA OSOBY           | 17 | 3  | 8  | 2  | 5  | 6  | 10 | 13 | 2  | 6  | 1  | 22 | 95     |

## LINIE VNITRNIHO NEPRITELE:

|                  |     |     |     |     |     |     |     |     |     |     |    |     |      |
|------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|------|
| OSOBNÍ SVAZKY    | 34  | 17  | 0   | 12  | 29  | 13  | 26  | 26  | 8   | 15  | 14 | 64  | 258  |
| Z TOHO CIZINCŮ   | 0   | 1   | 0   | 0   | 1   | 1   | 0   | 0   | 0   | 0   | 0  | 16  | 19   |
| SIGNALNÍ SVAZKY  | 81  | 46  | 41  | 47  | 66  | 120 | 60  | 39  | 28  | 38  | 6  | 90  | 662  |
| Z TOHO CIZINCŮ   | 0   | 0   | 1   | 1   | 2   | 0   | 2   | 1   | 1   | 1   | 1  | 11  | 22   |
| PATRACÍ SVAZKY   | 6   | 2   | 2   | 4   | 5   | 5   | 10  | 10  | 3   | 2   | 2  | 4   | 55   |
| OBJEKTOVÉ SVAZKY | 133 | 63  | 77  | 66  | 74  | 179 | 133 | 80  | 59  | 89  | 20 | 124 | 1097 |
| KONTROLNÍ SVAZKY | 0   | 0   | 1   | 10  | 7   | 1   | 3   | 0   | 7   | 0   | 0  | 99  | 128  |
| CELKEM SVAZKU    | 254 | 148 | 121 | 139 | 181 | 318 | 232 | 155 | 105 | 144 | 42 | 381 | 2220 |
| Z TOHO NA OSOBY  | 115 | 83  | 41  | 59  | 95  | 133 | 86  | 65  | 36  | 53  | 20 | 154 | 940  |

## LINIE OCHRANY EKONOMIKY:

|                  |    |    |    |    |    |    |    |    |    |    |    |     |     |
|------------------|----|----|----|----|----|----|----|----|----|----|----|-----|-----|
| OSOBNÍ SVAZKY    | 12 | 4  | 4  | 0  | 3  | 3  | 6  | 1  | 1  | 1  | 1  | 5   | 41  |
| Z TOHO CIZINCŮ   | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0   | 1   |
| SIGNALNÍ SVAZKY  | 12 | 0  | 8  | 11 | 0  | 13 | 8  | 1  | 6  | 5  | 6  | 30  | 108 |
| Z TOHO CIZINCŮ   | 0  | 0  | 1  | 0  | 0  | 0  | 0  | 0  | 2  | 1  | 1  | 4   | 9   |
| PATRACÍ SVAZKY   | 7  | 3  | 3  | 1  | 2  | 4  | 9  | 5  | 1  | 3  | 1  | 4   | 42  |
| OBJEKTOVÉ SVAZKY | 51 | 19 | 18 | 6  | 12 | 38 | 19 | 13 | 14 | 8  | 5  | 132 | 334 |
| KONTROLNÍ SVAZKY | 0  | 0  | 0  | 3  | 3  | 0  | 1  | 2  | 0  | 0  | 0  | 23  | 32  |
| CELKEM SVAZKU    | 82 | 26 | 33 | 21 | 28 | 58 | 41 | 22 | 22 | 17 | 13 | 194 | 557 |
| Z TOHO NA OSOBY  | 24 | 4  | 12 | 11 | 11 | 16 | 14 | 2  | 7  | 6  | 7  | 35  | 149 |

## UHRNEM:

|                  |     |     |     |     |     |     |     |     |     |     |    |     |      |
|------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|------|
| OSOBNÍ SVAZKY    | 46  | 23  | 4   | 12  | 33  | 17  | 34  | 29  | 9   | 16  | 15 | 70  | 308  |
| Z TOHO CIZINCŮ   | 1   | 2   | 0   | 0   | 2   | 1   | 0   | 0   | 0   | 0   | 0  | 16  | 22   |
| SIGNALNÍ SVAZKY  | 110 | 67  | 57  | 60  | 78  | 138 | 76  | 51  | 36  | 49  | 13 | 141 | 876  |
| Z TOHO CIZINCŮ   | 6   | 0   | 2   | 1   | 3   | 4   | 2   | 3   | 4   | 2   | 2  | 31  | 60   |
| PATRACÍ SVAZKY   | 16  | 6   | 9   | 5   | 7   | 14  | 19  | 15  | 4   | 6   | 4  | 13  | 118  |
| OBJEKTOVÉ SVAZKY | 191 | 83  | 98  | 77  | 88  | 218 | 172 | 97  | 77  | 103 | 32 | 290 | 1526 |
| KONTROLNÍ SVAZKY | 0   | 0   | 2   | 13  | 11  | 2   | 6   | 2   | 8   | 1   | 0  | 156 | 201  |
| CELKEM SVAZKU    | 363 | 179 | 170 | 167 | 217 | 389 | 307 | 194 | 134 | 175 | 64 | 670 | 3029 |
| Z TOHO NA OSOBY  | 156 | 90  | 61  | 72  | 111 | 155 | 110 | 80  | 45  | 65  | 28 | 211 | 1184 |

## Instrumental Variables: Earnings

| Instrument                    | (1)                  | (2)                  |
|-------------------------------|----------------------|----------------------|
| OLS                           | -0.338***<br>(0.086) | -0.316***<br>(0.084) |
| Prosecution                   | -0.332***<br>(0.113) | -0.328***<br>(0.110) |
| Rehabilitation                |                      |                      |
| Total                         | -0.354***<br>(0.099) | -0.346***<br>(0.096) |
| Economic                      | -0.454***<br>(0.109) | -0.440***<br>(0.106) |
| Political                     | -0.519***<br>(0.119) | -0.504***<br>(0.116) |
| Controlling for Dispossession | No                   | Yes                  |

\* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ .

Residence in big city: Prosecution -0.525\*\*\* (0.224)

Residence in big city: Rehabilitation -0.556\*\*\* (0.207)

## Instrumental Variables: Pensions

| Instrument                    | Instrument Based On Year of Ending |                     |                    |                    |
|-------------------------------|------------------------------------|---------------------|--------------------|--------------------|
|                               | First Job                          |                     | Last Job           |                    |
|                               | (1)                                | (2)                 | (3)                | (4)                |
| Initial Pension               |                                    |                     |                    |                    |
| Prosecution                   | -0.432**<br>(0.181)                | -0.437**<br>(0.185) | -0.304*<br>(0.160) | -0.319*<br>(0.163) |
| Rehabilitation                | -0.462**<br>(0.187)                | -0.472**<br>(0.194) | -0.281<br>(0.209)  | -0.295<br>(0.215)  |
| Pension in 2006               |                                    |                     |                    |                    |
| Prosecution                   | -0.041<br>(0.071)                  | -0.114<br>(0.082)   | -0.024<br>(0.068)  | -0.039<br>(0.074)  |
| Rehabilitation                | -0.035<br>(0.075)                  | -0.057<br>(0.077)   | -0.006<br>(0.068)  | -0.033<br>(0.074)  |
| Controlling for Dispossession | No                                 | Yes                 | No                 | Yes                |

\* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ .

OLS coefficient: Initial pension -0.405\*\* (0.186)

OLS coefficient: Current pension 0.027 (0.066)

# Robustness Tests

- ▶ Observed heterogeneity: OLS and matching models
- ▶ Unobserved heterogeneity: Altonji et al. (2005)
- ▶ Test for omitted variables Oster (2013)
- ▶ Placebo regressions and recall bias
- ▶ Sample selection → lower bound

## Robustness

- ▶ OLS, matching estimates, omitted variables Oster (2013)
- ▶ The role of unobservables (Altonji et al., 2005)
  - ▶ Equality of means of distributions of observable and unobservable characteristics (adjusted for their respective variances) that determine treatment
  - ▶  $\hat{\alpha}/bias$  ratio of: 2.045 (ever persecuted) or 1.383 (job loss persecution)  
(normalized shift in distribution of unobservables would have to be  $x$  times as large as shift in observables to explain away effects of persecution estimated by OLS)
  - ▶  $\hat{\alpha}/bias$  ratio for pensions smaller but higher than 1 for job loss due to persecution



## Additional analysis: Placebo Regression and Recall Bias

- ▶ No treatment effect in a placebo regression for first job earnings
- ▶ Recall bias: correlation with non-reporting
  - ▶ No correlation: ever persecuted, dispossessed, job loss due to persecution, and displacement
  - ▶ Negative correlation: laid off and earnings
  - ▶ Positive correlation: job discrimination and earnings, females
  - ▶ Negative correlation: time elapsed, age-10 conditions
  - ▶ No education bias

## Other results

- ▶ Disappointing job career (3.2 odds)
- ▶ Disappointing job achievements (1.9 odds)
- ▶ Depression symptoms (1.5 odds)
- ▶ Period of financial hardship (1.2 odds)
- ▶ No health effects (of respondents)

## Implications

- ▶ Compensation for political oppression or discrimination
- ▶ Reparations and transitional justice
- ▶ Development through justice theory  
Elster (2006), DeGreiff (2006), Olsen et al. (2011)
- ▶ Stability theory: Forget and forgive
- ▶ Reparations: WWII, natives, colonies, forced adoptions, sterilization
- ▶ Conflicts: Balkan, Israel, civil wars
- ▶ Importance: Non-democratic regimes 40% of world population

## Conclusions

“In a country where the sole employer is the State, opposition means death by slow starvation. The old principle: who does not work shall not eat, has been replaced by a new one: *who does not obey shall not eat.*”

## Conclusions

“In a country where the sole employer is the State, opposition means death by slow starvation. The old principle: who does not work shall not eat, has been replaced by a new one: *who does not obey shall not eat.*”



Leon Trotsky  
(1937)

## Conclusions: Past



## Conclusions: Present



## Conclusions: Future





# Treatment effect on wages: single treatment in OLS and matching

Table 1: Earnings: single treatment OLS vs matching

|                                                                   | Ever                 |                      | Ever Job             | Ever Job Loss        |                      |                      |
|-------------------------------------------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
|                                                                   | Persecuted           | Dispossessed         | Discr.               | Persecution          | Laid Off             | Displaced            |
|                                                                   | (1)                  | (2)                  | (3)                  | (4)                  | (5)                  | (6)                  |
| Single Treatment Estimates, OLS                                   |                      |                      |                      |                      |                      |                      |
| Treatment                                                         | -0.089<br>(0.054)    | -0.137***<br>(0.053) | -0.095<br>(0.093)    | -0.265**<br>(0.104)  | -0.049<br>(0.089)    | 0.023<br>(0.063)     |
| Female                                                            | -0.378***<br>(0.051) | -0.374***<br>(0.050) | -0.382***<br>(0.051) | -0.379***<br>(0.050) | -0.380***<br>(0.051) | -0.380***<br>(0.050) |
| Education 10-13 years                                             | 0.098<br>(0.060)     | 0.091<br>(0.057)     | 0.103*<br>(0.059)    | 0.101*<br>(0.059)    | 0.100*<br>(0.059)    | 0.103*<br>(0.062)    |
| Education >13 years                                               | 0.227***<br>(0.072)  | 0.213***<br>(0.069)  | 0.233***<br>(0.073)  | 0.248***<br>(0.072)  | 0.219***<br>(0.072)  | 0.221***<br>(0.072)  |
| R <sup>2</sup>                                                    | 0.219                | 0.224                | 0.218                | 0.224                | 0.217                | 0.216                |
| Matching Estimator: Average Treatment Effect for the Treated, OLS |                      |                      |                      |                      |                      |                      |
| ATT                                                               | -0.062<br>(0.045)    | -0.148***<br>(0.041) | -0.037<br>(0.061)    | -0.263***<br>(0.084) | 0.060<br>(0.070)     | -0.058*<br>(0.034)   |
| Mean Bias Before                                                  | 20.075               | 13.748               | 35.955               | 48.824               | 17.212               | 13.082               |
| Mean Bias After                                                   | 3.922                | 3.403                | 7.251                | 13.499               | 7.315                | 2.998                |

N=1,228. \* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ . Additional controls included.

# Effect of treatment on initial pensions: single treatment in OLS and matching

Table 2: Initial pensions before 1992: single treatment OLS vs matching

|                                                                   | Ever<br>PersecutedDispossessed |                      | Ever Job<br>Discr.   | Ever Job Loss<br>Persecution Laid Off Displaced |                      |                      |
|-------------------------------------------------------------------|--------------------------------|----------------------|----------------------|-------------------------------------------------|----------------------|----------------------|
|                                                                   | (1)                            | (2)                  | (3)                  | (4)                                             | (5)                  | (6)                  |
| Single Treatment Estimates, OLS                                   |                                |                      |                      |                                                 |                      |                      |
| Treatment                                                         | -0.115<br>(0.090)              | -0.074<br>(0.087)    | -0.024<br>(0.123)    | -0.417***<br>(0.099)                            | -0.237<br>(0.151)    | -0.206**<br>(0.098)  |
| Female                                                            | -0.285***<br>(0.064)           | -0.278***<br>(0.064) | -0.278***<br>(0.063) | -0.296***<br>(0.064)                            | -0.282***<br>(0.065) | -0.257***<br>(0.066) |
| Education 10-13 years                                             | 0.055<br>(0.069)               | 0.048<br>(0.066)     | 0.059<br>(0.069)     | 0.057<br>(0.068)                                | 0.067<br>(0.068)     | 0.080<br>(0.071)     |
| Education >13 years                                               | -0.030<br>(0.097)              | -0.035<br>(0.099)    | -0.015<br>(0.094)    | 0.002<br>(0.090)                                | -0.014<br>(0.097)    | 0.018<br>(0.089)     |
| R <sup>2</sup>                                                    | 0.185                          | 0.182                | 0.178                | 0.194                                           | 0.192                | 0.198                |
| Matching Estimator: Average Treatment Effect for the Treated, OLS |                                |                      |                      |                                                 |                      |                      |
| ATT                                                               | -0.157*<br>(0.081)             | -0.144<br>(0.092)    | -0.237***<br>(0.081) | -0.379**<br>(0.154)                             | -0.177<br>(0.153)    | -0.128<br>(0.096)    |
| Mean Bias Before                                                  | 20.709                         | 21.334               | 32.395               | 44.198                                          | 29.452               | 21.068               |
| Mean Bias After                                                   | 5.127                          | 5.078                | 11.310               | 17.099                                          | 12.180               | 11.267               |

N=192. \* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ . Additional controls included.

# Effect of treatment on 2006 pensions: single treatment in OLS and matching

Table 3: Pensions in 2006: single treatment OLS vs matching

|                                                                   | Ever<br>PersecutedDispossessed |                      | Ever Job<br>Discr.   | Ever Job Loss<br>Persecution Laid Off Displaced |                      |                      |
|-------------------------------------------------------------------|--------------------------------|----------------------|----------------------|-------------------------------------------------|----------------------|----------------------|
|                                                                   | (1)                            | (2)                  | (3)                  | (4)                                             | (5)                  | (6)                  |
| Single Treatment Estimates, OLS                                   |                                |                      |                      |                                                 |                      |                      |
| Treatment                                                         | -0.074<br>(0.059)              | -0.057<br>(0.051)    | -0.071<br>(0.050)    | -0.136<br>(0.084)                               | 0.027<br>(0.070)     | -0.005<br>(0.044)    |
| Female                                                            | -0.138***<br>(0.031)           | -0.133***<br>(0.030) | -0.135***<br>(0.030) | -0.139***<br>(0.030)                            | -0.132***<br>(0.030) | -0.132***<br>(0.030) |
| Education 10-13 years                                             | -0.031<br>(0.030)              | -0.037<br>(0.031)    | -0.031<br>(0.030)    | -0.029<br>(0.030)                               | -0.029<br>(0.030)    | -0.028<br>(0.030)    |
| Education >13 years                                               | 0.028<br>(0.045)               | 0.022<br>(0.046)     | 0.037<br>(0.047)     | 0.044<br>(0.047)                                | 0.038<br>(0.047)     | 0.039<br>(0.046)     |
| R <sup>2</sup>                                                    | 0.324                          | 0.320                | 0.315                | 0.317                                           | 0.308                | 0.307                |
| Matching Estimator: Average Treatment Effect for the Treated, OLS |                                |                      |                      |                                                 |                      |                      |
| ATT                                                               | -0.092**<br>(0.036)            | -0.086**<br>(0.038)  | -0.112<br>(0.076)    | -0.005<br>(0.056)                               | 0.112**<br>(0.052)   | 0.067*<br>(0.039)    |
| Mean Bias Before                                                  | 20.709                         | 21.334               | 32.395               | 44.198                                          | 29.452               | 21.068               |
| Mean Bias After                                                   | 5.127                          | 5.078                | 11.310               | 17.099                                          | 12.180               | 11.267               |

N=192. \* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ . Additional controls included.

## Effect of treatment on wages: role of unobservable heterogeneity

Table 4: Earnings: the role of unobservables

|                                                                                               | Ever       |              | Ever Job | Ever Job Loss |          |           |
|-----------------------------------------------------------------------------------------------|------------|--------------|----------|---------------|----------|-----------|
|                                                                                               | Persecuted | Dispossessed | Discr.   | Persecution   | Laid Off | Displaced |
|                                                                                               | (1)        | (2)          | (3)      | (4)           | (5)      | (6)       |
| Selection on unobservables (Altonji et al. (2005)), OLS                                       |            |              |          |               |          |           |
| $[\hat{E}(X'\hat{\gamma} T=1) - \hat{E}(X'\hat{\gamma} T=0)] / \widehat{Var}(X'\hat{\gamma})$ | 1.536      | 0.536        | 2.948    | 3.611         | -0.615   | -1.000    |
| $\widehat{Var}(X'\hat{\gamma})$                                                               | 0.060      | 0.060        | 0.060    | 0.060         | 0.060    | 0.060     |
| $\widehat{Var}(\hat{\varepsilon})$                                                            | 0.232      | 0.232        | 0.232    | 0.232         | 0.232    | 0.232     |
| $E(\varepsilon T=1) - E(\varepsilon T=0)$                                                     | 0.357      | 0.125        | 0.685    | 0.839         | -0.143   | -0.233    |
| $Cov(\varepsilon, \tilde{T}) / Var(\tilde{T})$                                                | -0.044     | -0.159       | -0.017   | -0.192        | 0.057    | -0.053    |
| $\hat{\alpha} / \text{bias ratio}$                                                            | 2.045      | 0.860        | 5.493    | 1.383         | -0.865   | -0.435    |

N=1,228. \* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ .

- $\hat{\alpha} / \text{bias ratio}$  of: 2.045 (ever persecuted) or 1.383 (job loss persecution) implies that normalized shift in distribution of unobservables would have to be 2 times (1.4 times) as large as shift in observables to explain away effects of persecution estimated by OLS.

## Effect of treatment on pensions: role of unobservable heterogeneity

Table 5: Pensions: the role of unobservables

|                                                         | Ever       |              | Ever Job | Ever Job Loss |          |           |
|---------------------------------------------------------|------------|--------------|----------|---------------|----------|-----------|
|                                                         | Persecuted | Dispossessed | Discr.   | Persecution   | Laid Off | Displaced |
|                                                         | (1)        | (2)          | (3)      | (4)           | (5)      | (6)       |
| Selection on unobservables (Altonji et al. (2005)), OLS |            |              |          |               |          |           |
| Initial pensions:                                       |            |              |          |               |          |           |
| $\hat{\alpha}/bias$ ratio                               | 0.770      | 0.588        | 0.286    | 1.118         | 0.942    | 0.911     |
| 2006 pensions:                                          |            |              |          |               |          |           |
| $\hat{\alpha}/bias$ ratio                               | 0.668      | 0.667        | 0.701    | 1.225         | 0.287    | -0.104    |
| N=192. * $p < 0.1$ , ** $p < 0.05$ , *** $p < 0.01$ .   |            |              |          |               |          |           |

- $\hat{\alpha}/bias$  ratio for pensions smaller than for earnings (but higher than 1 for job loss due to persecution for initial pensions).